

Specifications for commercial vehicle (Mobile Lab)

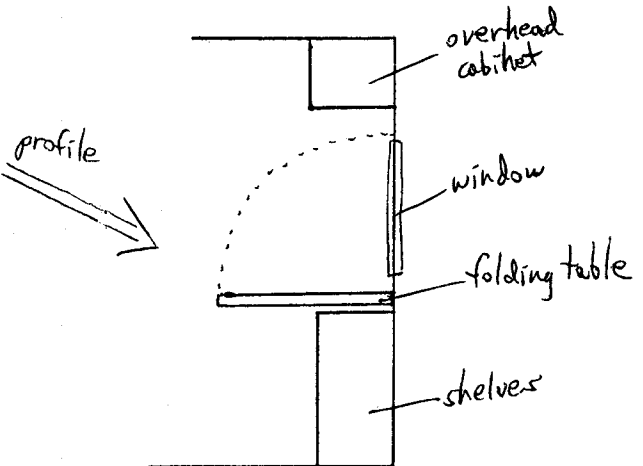
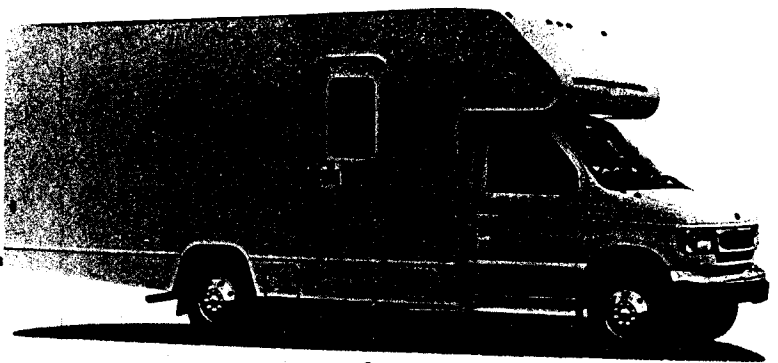
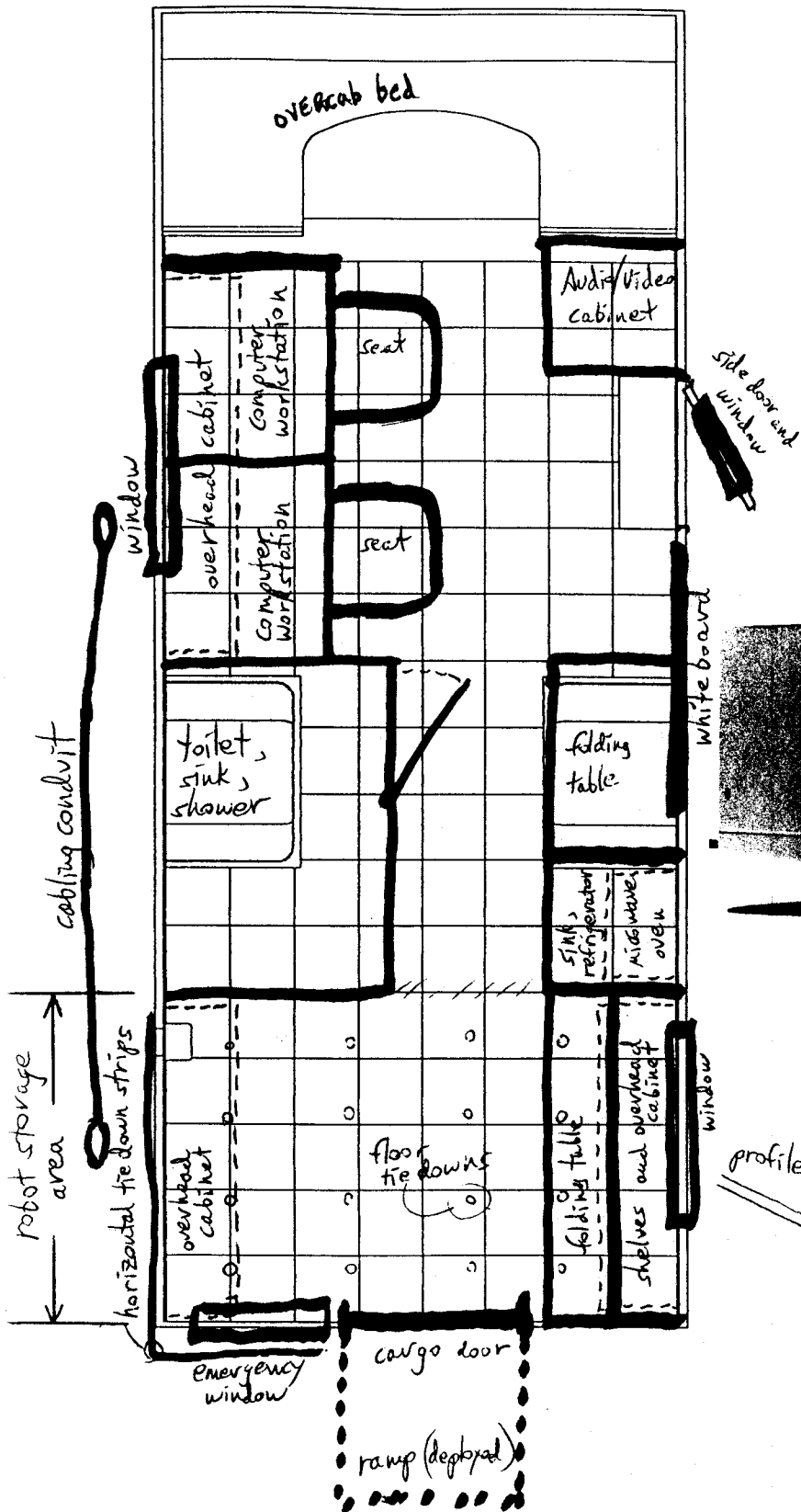
The following are the minimum specifications for this requirement.
See plan view (Figure 1) for location of major items.

1. Class C vehicle, based on standard truck chassis (for example, Ford E350 chassis or similar), exterior dimensions: maximum length 25 ft, maximum height 10'8", and maximum width 8'6"
2. internal dimensions: minimum height 80", minimum width 96", and minimum length 16 ft
3. gasoline engine
4. spare tire
5. engine-powered air conditioning and heater for driver compartment
6. automatic transmission
7. power steering
8. power brakes
9. cruise control
10. roof-mounted air conditioner with heat pump, minimum 14,000 BTU
11. 120V single phase AC generator, minimum 6.5 kW, gasoline powered
12. connection for external (shore) electrical power
13. minimum of 3 independent electrical circuits, each one individually selectable for shore power or generator, one circuit for air conditioner, lighting, microwave, and two circuits for computers/electronics devices
14. minimum of seven available interior 120V electrical receptacles (two by the computer workstations, one by the conference table, one by the audio/video equipment cabinet, one in the kitchen area, and two in robot storage area)
15. external 120V electrical receptacle with lockable, weatherproof cover
16. single electrical control panel with circuit breakers, shore power/generator switches, and load meters
17. all circuits wired with household receptacles, and factory-installed appliances equipped with household 120V plugs
18. fresh water supply tank
19. wastewater retention tank
20. external shower head and/or hose connection
21. ladder to roof
22. driver compartment radio with compact disc player
23. leveling mechanism
24. passenger side entry door to rear body with non-opening window, with lock
25. electrically powered air compressor and tank in an exterior storage bay, 2 gallon tank minimum, 4CFM minimum flow
26. locks for all external storage areas
27. fire extinguisher
28. carbon monoxide detector
29. smoke detector
30. alarm system with siren and pager alert function and lojack tracking system
31. modest graphics showing affiliation applied to exterior
32. toilet, sink, and shower in a maximum floor space of 40" from wall by 60" wide

33. small kitchen sink, single basin, under-counter refrigerator with freezer, and overhead microwave oven in a maximum floor space of 24" by 24"
34. refrigerator and microwave oven bolted to vehicle
35. adjacent tables for 2 computer workstations, each table minimum 30" deep by 36" wide, with clear space underneath and made of materials suitable for attaching tie-down hardware
36. cabling conduit running from the wall below computer workstation tables, behind the lavatory, and into the robot storage area
37. capability to have tie-down points attached to floor and walls
38. two chairs (swiveling, seat belted, height and recline adjustments) for computer workstation tables
39. wall-mounted whiteboard, minimum 48" wide by 36" high
40. small folding conference table, maximum depth of 24" maximum width of 36", located beneath whiteboard (deployed up, stowed down)
41. audio/video cabinet with television in the upper portion, an 8" shelf suitable for a VCR, and a doored cabinet in the lower portion, floor-space maximum 24" by 24"
42. television minimum 21" diagonal, with accessible signal input connectors, bolted to cabinet and able to swivel to face in the direction of the small conference table or the computer workstation tables
43. ceiling lighting with switch
44. one opening window behind the computer workstation tables, between the top of the tables and bottom of the overhead cabinets, minimum 18" tall by 36" wide, with lock
45. window treatment for all windows (blinds, shades, or curtains)
46. passthrough from the driving compartment to the body of the vehicle
47. path through the length of the interior, minimum width of 24" at all points
48. air vent with reversible fan, sealable against weather, with lock
49. overhead cabinets with doors above workstation tables, maximum of 18" tall and 18" deep
50. low-pile carpeting in all areas except robot storage area
51. floor space for three robots at rear of vehicle, minimum floor area of 35 sq. ft. and clear to a minimum height of 60"
52. cargo door in rear wall of vehicle, bottom of door flush with interior floor, minimum 36" wide and 6 ft tall, with lock
53. wall shelving (minimum 4 shelves, adjustable spacing, minimum 36" wide) on one wall of robot storage area with a lip on the front edge of each shelf
54. folding side table (deployed down, stowed up) mounted to the wall just above the top shelf of the shelving unit, width equal to distance from sink counter to rear wall and depth equal to sink counter, folding leg that does not interfere with shelf access when table is stowed
55. overhead cabinets with doors on both sides of robot storage area, maximum of 18" tall and 18" deep
56. emergency pop-out window in robot storage area positioned so that it is not blocked by stowed ramp or deployed or stowed side table, minimum 24" tall by 24" wide
57. opening window in robot storage area in side wall above folding side table and below overhead cabinets, minimum 18" tall by 36" wide, with lock
58. stowable pull-out ramp at cargo door from interior floor height to ground, stowable under floor or inside without fouling robot storage area and without detaching it from the vehicle, minimum deployed length 10 ft, minimum width 34"

- 59. washable, hard, minimal textured rubber flooring in rear robot storage area
- 60. minimum of 16 tie-downs spaced evenly in the floor of the robot storage area with a maximum separation of 24" which retract flush with the floor or are recessed flush with the floor, each capable of a minimum 100 lb. static load
- 61. floor of robot storage area that supports a minimum total static load of 750 lb. applied to tie-downs (acting either toward floor or toward ceiling)
- 62. provision for attaching tie-down straps at 3" minimum intervals horizontally around the non-shelved side wall and adjacent portion of rear wall of the robot storage area at 7" and 28" above the floor
- 63. provide bed in immediate space above driving compartment

FRONT



REAR

- FIGURE 1 -